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Aims
To improve obstetric and neonatal outcomes for women with a diagnosed severe mental illness by:

- utilising a multidisciplinary team approach as recommended by the NHMRC Antenatal Care guidelines
- small identified team providing individualised comprehensive continuity of care
- management of psychotropic medications and potential effects in pregnancy and postpartum
- increasing the rate of attendance to antenatal services
- monitor closely for obstetric complications
- liaison with psychiatric, obstetric and primary care providers
- planning for birth and postnatal support

Key points
1. Women attending the CAMI clinic require routine antenatal care. Additionally specific vigilance for obstetric and psychosocial complications is required, entailing detailed information about medical, physical, psychiatric, social, history of drug and alcohol use, and current and recent medication history.
2. Women attending the CAMI clinic should be provided with additional information regarding:
   - Psychotropic medications in pregnancy
   - relative risks of relapse of their disorder in pregnancy and postpartum
   - nutrition and dietary requirements
   - psychosocial supports
3. Discharge planning and documentation commences at the first visit.
4. Women are informed the proposed postnatal stay is 5 days to allow monitoring of the mental state and assist parenting.
5. Women attending the CAMI clinic should not be discharged from hospital prior to being seen by the psychiatrist and the social worker.

Criteria for CAMI referral

- Chronic psychotic disorders such as schizophrenia
- Severe mood disorders e.g. Bipolar Affective Disorders or recurrent major depression with a history of psychiatric hospitalisation
- Past history of postpartum psychosis
- Severe non-psychotic disorders with significant impairment to functioning and/or complex care (discussed with the CAMI team).
Referral process

Antenatal referrals are received by:
- Clinical Referral Co-ordinator for the antenatal clinic at KEMH
- Department of psychological medicine, and then forwarded to the CAMI clinic.

All referrals are triaged in the CAMI clinic. Women triaged to the CAMI clinic will be given appointments and registered with the Department of Psychological Medicine under the CAMI clinic program. Referrals for women who do not meet the criteria to attend the CAMI clinic are sent to the Clinical Referral Co-ordinator who arrange appointments at other obstetric clinics.

<table>
<thead>
<tr>
<th>PROCEDURE</th>
<th>ADDITIONAL INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Initial assessment and triage</td>
<td>Women with severe mental illness (SMI) may present later in their pregnancy than other women. 1</td>
</tr>
<tr>
<td>Conduct the booking visit and follow up antenatal visits as for all pregnant women attending KEMH. See Clinical Guidelines: Obstetrics and Gynaecology: Antenatal Care Schedule</td>
<td>Poor or late attendance may be due to unplanned pregnancy, previous poor experiences with health services, and lifestyle issues. 2</td>
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<tr>
<td>The timing of the booking visit will be determined following CAMI review. The first visit may be as early as 12 weeks gestation depending on individual clinical circumstances.</td>
<td>Fear of statutory involvement includes fear of a child being placed in care.</td>
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<tr>
<td>2 Medical history and physical assessment</td>
<td>Women who have a SMI may be at greater risk of metabolic complications in pregnancy e.g. diabetes, obesity and hypertension. 3</td>
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<tr>
<td>2.1 General medical health</td>
<td>Psychotropic medication may have an impact on general medical disorders e.g. lithium is associated with thyroid dysfunction 4, and antipsychotics and cardiac effects 5.</td>
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<td>2.2 Sexually transmitted infections (STIs) / cervical screening test</td>
<td>Women with SMI may be at greater risk of STIs 6 and may be less likely to receive regular cervical screening and should therefore be fully investigated.</td>
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</table>
PROCEDURE | ADDITIONAL INFORMATION
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2.3 Drug and alcohol screening | Women with SMI are at increased risk of smoking, alcohol and substance abuse. Refer to Women and Newborn Drug and Alcohol Service (WANDAS) for consultation if substance misuse is an issue.

3. Complications
Women with SMI have increased rates of pregnancy and birth complications.³

4 Mental health history
4.1 All CAMI women on initial assessment will be reviewed by the psychiatric team.
A history of diagnosis, hospitalisations, and medication use, including during the first trimester exposure is documented.

4.2 Liaise with the Community treating team / case manager / Private Psychiatrist.

4.3 Conduct an individualised risk / benefit analysis e.g. information regarding the safety data for medication in both pregnancy and breastfeeding. Discuss the relative risks of relapse of their disorder and the possible consequences of a relapse of their disorder in pregnancy and postpartum.
Assess information about the use of mood stabilisers in pregnancy and fetal effects.⁸,⁹
See also KEMH Psychological Medicine guideline: The Use of Psychotropic Medication in Pregnancy and ‘Useful resources’ section at end of guideline for fact sheets/articles.

4.4 Provide information to woman about antenatal support groups.

4.5 Discuss with the woman the role of the Mother and Baby unit (MBU).
Women with SMI are at increased risk of psychiatric relapse postpartum.¹⁰,¹¹
If transfer to the MBU postpartum is being considered, provide the woman with a brochure and arrange a tour of the unit.
Liaise with the MBU in high risk cases.

5 Social assessment
5.1 Refer women to Social Work according to their criteria. See Clinical Guideline Social Work Working with Obstetric Patients-Social Work and Social Work Referral
All women attending CAMI clinic will have their case discussed with the social worker.
Women will be offered an
PROCEDURE

In addition refer:
- women with schizophrenia
- primigravid women
- women with no support network

5.2 Child protection:
- any woman who is assessed may require involvement with the Department for Child Protection (DCP). The social worker will discuss this with the CAMI team as well as the Head of the Social Work Department.
- should the case already be open or opened as a result of a referral made by KEMH to CPFS the pre-birth planning process needs to commence as soon as possible
- Complex care planning will be documented regarding the antenatal and postnatal management of women with complex psycho-social circumstances.

5.3 At the earliest opportunity complete screening for Family and Domestic Violence (FDV).

6. Current pregnancy

6.1 Ultrasounds

Ultrasounds are individualised according to risk factors, such as medication exposure in the first trimester and fetal wellbeing.

Consider:
- First trimester screen
- Anatomy scan
- Fetal growth and wellbeing

ADDITIONAL INFORMATION

assessment by the social worker at the booking visit if she meets the criteria.

Follow up visits with the social worker in on an individual basis.

Women with SMI have significantly higher rates of DCP involvement, and women with schizophrenia are less likely to have care of their children.2


Housing situation – SMI women are at risk for homelessness.

Partner and supports – women with schizophrenia may have higher rates of being single and less likely to be supported in their pregnancy.2 Data collaborated from the CAMI clinic has shown women with SMI are more likely to have a partner who is suffering a SMI.

Women with SMI are at increased risk of FDV.2

Women with SMI should be referred to the KEMH CAMI clinic for early pregnancy care.

Women with SMI may have been exposed to medication in the first trimester. This has been associated with increased fetal abnormalities e.g. mood stabiliser, lithium9, 12, 13. As such a tertiary level quality ultrasound should be arranged.

Antipsychotic medication exposure
## PROCEDURE | ADDITIONAL INFORMATION
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**6.2 Blood investigations** | during pregnancy may be associated with abnormalities in fetal growth.  
Routine antenatal screening tests include consideration for:
- B12, folate | Alcohol, drug and medication use may lead to the deficiency of essential vitamins which can be exacerbated by poor nutrition.
- Ferritin | Nutritional deficiency may increase risk of depression.
| | Anorexia or eating disorders in pregnancy can lead to nutritional deficiency.
- Vitamin D | Vitamin D is reduced in women with SMI and the risk can be exacerbated by women with increased BMI.
- Thyroid Function Test | Thyroid dysfunction may be an aggravating factor to mental illness in pregnancy.  
Antipsychotic medication e.g. lithium may precipitate abnormal thyroid function.
- Glucose Tolerance Test | Women with SMI may be more at risk of metabolic disorders. Antipsychotic medication has the potential to increase the risk of abnormal glucose metabolism, and has been linked with an increased risk of gestational diabetes mellitus (GDM).
- Fasting Blood Sugar Level (BSL) at booking. | Lithium levels should be monitored frequently in pregnancy and the level maintained around 0.5mmol/L. Aim for tapering of lithium levels prior to birth.  
Refer to the KEMH Bipolar management protocol. This will be placed in the front of the patient’s medical record notes where appropriate.
- Lithium levels each trimester, then weekly if possible from 36 weeks gestation. | Medications are metabolised through
### PROCEDURE

- Liver function tests (LFTs)
- Electrocardiogram (ECG)

### ADDITIONAL INFORMATION

- the liver and kidneys and these may need monitoring during pregnancy.
- Antipsychotics, lithium and some antidepressant medication at increased doses can affect the conduction of the heart. An ECG should be performed.\(^\text{23}\)

#### Nutritional advice

**7.1** Assess the BMI at the booking visit. Document the woman’s weight each visit, and monitor throughout the pregnancy.

**7.2** Arrange dietician review for women with:
- increased BMI
- low BMI
- increased weight gain due to medication
- positive GTT

Consider dietician review in all women taking antipsychotic medication.

#### Parent education

Additional information is given about:
- medications and breastfeeding
- blood borne viruses
- effects of drug, alcohol misuse and smoking
- risk behaviours, consequences and increased surveillance as deemed necessary
- extended hospital stay of 5 days
- management and frequency of ongoing antenatal care
- postnatal support services

Women with SMI are at increased risk of postpartum relapse\(^\text{10}\) and as such require close monitoring in the immediate postpartum period.

Neonates are at risk of Neonatal Discontinuation Syndrome and may have increased need for Special Care Nursery.\(^\text{3}\)

#### Provision of written information

Women with SMI are at risk of increased BMI\(^\text{3, 24}\). Medication used in the treatment of mental disorders can increase appetite and sugar cravings leading to excessive weight gain.\(^\text{20}\)
PROCEDURE | ADDITIONAL INFORMATION
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At the booking visit, women will be provided with the leaflet 'Childbirth and Mental Illness Antenatal Clinic (CAMI)'. | 

10 **Referrals**
- Contraception

   Contraception is discussed with all women at the 36 week antenatal visit. Some medications may interfere with the use of contraception. Certain contraception may aggravate the woman’s mental state.

   For women requiring an Intrauterine Contraceptive Device (IUD) insertion postpartum, the referral to the Family Planning Clinic should be completed at the 38 week visit.

11 **Management plan**

   11.1 A psychiatric management plan and checklist MR248 is completed antenatally for all women.

   Some women may also need a sensitive birth plan due to a history of childhood sexual abuse (CSA).

   See Clinical Guideline O&G: Complex Care: Planning for

   11.2 Refer women on an individual basis for ‘Complex Care Management Planning’

   11.3 Women with Bipolar will have a ‘Bipolar Management Plan’ filed in their Medical Record notes.

   Women with Bipolar may be on medication such as Lithium, which will require special management around time of birth. Patients with Bipolar are at increased risk of relapse postnatally and that risk can be exacerbated by sleep deprivation postpartum.

**References**


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<th>No.</th>
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### Related WNHS policies, procedures and guidelines

**KEMH Guidelines:**
- Psychological Medicine guideline: [The Use of Psychotropic Medication in Pregnancy](#)
- O&G: [Antenatal Care Schedule](#) (initial & subsequent visits); [Complex Care: Planning](#)
- Social Work: [Working with Obstetric Patients- Social Work](#) and [Hub page](#) (via Intranet)

### Useful resources

**Resources**
- [NHMRC Antenatal Care guidelines](#) (external site)
- Fact sheets: Mother to Baby [http://mothertobaby.org/fact-sheets](#) (external site)
- Motherisk [http://www.cfpc.ca/Motherisk/](#) (external site)
- Bumps (Best Use of Medicines in Pregnancy) [www.uktis.org](#) (external site)

**Form:** [Social Work Referral form](#)

**Patient brochure:** Childbirth and Mental Illness Antenatal Clinic (CAMI)